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10/766,943	01/30/2004	Louis R. Testardi	tes5	4402

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EXAMINER	
TANINGCO, MARCUS H	

ART UNIT	PAPER NUMBER
2884	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/766,943	TESTARDI, LOUIS R.	
	Examiner	Art Unit	
	Marcus H. Taningco	2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *31-34 and 36-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15,18-25,27,28,30 and 35* is/are rejected.

7)☒ Claim(s) *16,17,26 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/30/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Claims 31-34 and 36-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/30/06.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 23, 30, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popescu (US 5,635,717).

Re claim 13, Popescu discloses a detecting apparatus (Fig. 1-3) comprising: a substantially rigid tube **6**; a scintillating fiber **2** mounted to the substantially rigid tube **6**, the scintillating fiber **2** having a first end and a second end; the scintillating fiber **2** having length of 2m (Col. 3, 21-22); a light intensity measuring device **1** mounted to the substantially rigid tube **6** in a substantially relatively immovable manner; coupling means for optically coupling the first end of the scintillating fiber **2** to an active portion of the light intensity measuring device **1** (Col. 2, 31); means for shielding **3** the scintillating fiber **2** from ambient light (Col. 3, 32-35); wherein the light intensity measuring device **1** produces an output signal in accordance with an amount of

light generated by the scintillating fiber **2** (Col. 2, 60-63); a bundle of 2-6 scintillating fibers having a diameter of approximately 1 mm, the scintillating fiber **2** being disposed inside the opaque tube **3** with a longitudinal axis of the scintillating fiber **2** extending in a direction away from the active portion of the light intensity measuring device **1**. Although Popescu fails to teach a scintillating fiber with a cross-sectional dimension of 5 mm, it would have been an abvious matter of design choice to provide a scintillating fiber with a cross-sectional dimension of 5 mm, since applicant has not disclosed that a scintillating fiber with a cross-sectional dimension of 5 mm solves any particular purpose and it appears that the invention would perform equally well with a bundle of 2-6 scintillating fibers having a diameter of approximately 1 mm. Furthermore, Popescu discloses an apparatus which, in normal operation: detects low-level radiation; evaluates and processes the signal (integrator circuit), excluding practically all the noise (filtering high frequency variations); and transmits the signal to a circuit to control a sound generator (Col. 1, 31-51; Col. 3, 41-49). Although Popescu fails to specify an AD converter, those skilled in the art can appreciate that AD converters are well known in the art, and conventionally used in image displaying devices. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with an AD converter in order to provide digital displays.

Re claim 23, Popescu discloses an apparatus, wherein said apparatus detects low-level radiation and filters high frequency variations (Col. 1, 31-51). Popescu fails, however, to teach an RC integrator circuit. It would have been an obvious matter of design choice to include an RC integrator circuit since it was known at the time the invention was made that RC integrator circuits were conventionally used to allow lower frequencies than a certain predetermined

frequency level to pass. With regards to the time constant, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the time constant, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Re claim 30, Popescu discloses a detecting apparatus (Fig. 1-3) comprising: a substantially rigid tube **6**; a scintillating fiber **2** mounted to the substantially rigid tube **6**, the scintillating fiber **2** having a first end and a second end; the scintillating fiber **2** having length of 2m (Col. 3, 21-22); a light intensity measuring device **1** mounted to the substantially rigid tube **6** in a substantially relatively immovable manner; coupling means for optically coupling the first end of the scintillating fiber **2** to an active portion of the light intensity measuring device **1** (Col. 2, 31); means for shielding the scintillating fiber **2** from ambient light (Col. 3, 32-35); wherein the light intensity measuring device **1** produces an output signal in accordance with an amount of light generated by the scintillating fiber **2** (Col. 2, 60-63); a bundle of 2-6 scintillating fibers having a diameter of approximately 1 mm, the scintillating fiber **2** being disposed inside the opaque tube **3** with a longitudinal axis of the scintillating fiber **2** extending in a direction away from the active portion of the light intensity measuring device **1**. Although Popescu fails to teach a scintillating fiber with a cross-sectional dimension of at least 2.5 mm, it would have been an obvious matter of design choice to provide a scintillating fiber with a cross-sectional dimension of at least 2.5 mm, since applicant has not disclosed that a scintillating fiber with a cross-sectional dimension of at least 2.5 mm solves any particular purpose and it appears that the invention would perform equally well with a bundle of 2-6 scintillating fibers having a diameter of approximately 1 mm. Furthermore, Popescu discloses an apparatus which, in normal

operation: detects low-level radiation; evaluates and processes the signal (integrator circuit), excluding practically all the noise (filtering high frequency variations); and transmits the signal to a circuit to control a sound generator (Col. 1, 31-51; Col. 3, 41-49). Although Popescu fails to specify an AD converter, those skilled in the art can appreciate that AD converters are well known in the art, and conventionally used in image displaying devices. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with an AD converter in order to provide digital displays.

Re claim 35, Popescu discloses the claimed invention except for the response time of the low-pass filter. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the time constant, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Claims 1-12, 14, 15, 18, 19-22, 24, 25, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popescu in view of Reed (US 5,313,065).

Re claim 1, Popescu discloses a detecting apparatus (Fig. 1-3) comprising: a substantially rigid structure **6**; a scintillating fiber **2** mounted to the substantially rigid structure **6**, the scintillating fiber **2** having a first end and a second end; the scintillating fiber **2** having length of 2m (Col. 3, 21-22); a light intensity measuring device **1** mounted to the substantially rigid structure **6** in a substantially relatively immovable manner; coupling means for optically coupling the first end of the scintillating fiber **2** to an active portion of the light intensity measuring device **1** (Col. 2, 31); means for shielding the scintillating fiber **2** from ambient light

(Col. 3, 32-35); wherein the light intensity measuring device **1** produces an output signal in accordance with an amount of light generated by the scintillating fiber **2** (Col. 2, 60-63); wherein the substantially rigid structure comprises an opaque tube **3** (Col. 3, 14-15), the scintillating fiber **2** being disposed inside the opaque tube **3** with a longitudinal axis of the scintillating fiber **2** extending in a direction away from the active portion of the light intensity measuring device **1**, and wherein the light intensity measuring device **1** comprises a photomultiplier tube (Col. 2, 60-63) attached to a first end of the substantially rigid opaque tube **3** by a light-proof connection (Col. 3, 30-32). Popescu discloses protecting the scintillating fibers using an opaque tube (Col. 3, 13-14), but fails to specify said tube is substantially rigid. Reed teaches a fiber optic radiation monitor comprising a scintillating fiber disposed inside a substantially rigid tube (Col. 2, 40). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with a substantially rigid tube in order to provide protection and durability.

Re claims 2 and 8, Popescu discloses an apparatus which, in normal operation: detects low-level radiation; evaluates and processes the signal (integrator circuit), excluding practically all the noise (filtering high frequency variations); and transmits the signal to a circuit to control a sound generator (Col. 1, 31-51; Col. 3, 41-49). Although Popescu fails to specify an AD converter, those skilled in the art can appreciate that AD converters are well known in the art, and conventionally used in image displaying devices. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with an AD converter in order to provide digital displays.

Re claim 3, Popescu discloses the claimed invention according to claim 2, except for the response time. It would have been obvious to one with ordinary skill in the art at the time the

invention was made to modify the response time, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Re claims 4, 5, and 7, Popescu discloses the claimed invention according to claim 1. Furthermore, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 1647 (1987).

Re claim 6, Popescu discloses the claimed invention but fails to specify said scintillating fiber is approximately equal to a width of a roadway. It would have been an obvious matter of design choice to increase the length of said scintillating fiber, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

Re claims 9 and 10, Popescu discloses an apparatus, wherein said apparatus detects low-level radiation and filters high frequency variations (Col. 1, 31-51). Popescu fails, however, to teach an RC low-pass filter circuit. It would have been an obvious matter of design choice to include an RC low-pass filter circuit since it was known at the time the invention was made that RC low-pass filter circuit were conventionally used to allow lower frequencies than a certain predetermined frequency level to pass. With regards to the time constant recited in claim 10, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the time constant, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Re claim 11, Popescu discloses the claimed invention according to claim 8, except for the response time. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the response time, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Re claim 12, Popescu discloses an apparatus which, in normal operation: detects low-level radiation; evaluates and processes the signal (integrator circuit), excluding practically all the noise (filtering high frequency variations); transmits the signal to a circuit to control a sound generator; and producing a sound-generating frequency, causing a sound signal at the detection of each pulse (Col. 1, 31-51; Col. 3, 41-49). Popescu fails to explicitly teach a voltage-to-frequency converter and an audible frequency with a pitch proportional to the absorbed radiation dose-rate. It would have been obvious to one with ordinary skill in the art at the time the invention was made to provide a voltage-to-frequency converter since it was known in the art that such converters are used to convert voltages to produce sound. Furthermore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the audible frequency with a pitch proportional to the absorbed radiation dose-rate in order to alert the user and allow the user to effectively find the target emitting ionizing radiation.

Re claim 14, Popescu discloses protecting the scintillating fibers using an opaque tube (Col. 3, 13-14), but fails to specify said tube is substantially rigid. Reed teaches a fiber optic radiation monitor comprising a scintillating fiber disposed inside a substantially rigid tube (Col. 2, 40). It would have been obvious to one with ordinary skill in the art at the time the invention

was made to modify Popescu with a substantially rigid tube in order to provide protection and durability.

Re claim 15, Reed teaches a fiber optic radiation monitor comprising a scintillating fiber disposed inside a substantially rigid tube (Col. 2, 40), but fails to specify said rigid tube comprises a thin-walled aluminum tube. However, aluminum is well known in the art for its durability, therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the rigid tube with a thin-walled aluminum tube in order to provide protection and durability.

Re claim 18, Popescu discloses said light intensity measuring device **1** comprises a photomultiplier tube (Col. 2, 60-63) attached to a first end of the substantially rigid opaque tube **3** by a light-proof connection (Col. 3, 30-32).

Re claim 19, Popescu discloses said scintillating fiber **2** having length of 2m (Col. 3, 21-22).

Re claims 20-22, Popescu discloses the claimed invention according to claim 13, except for the response time. It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the response time, since it has been held that where the general conditions of a claim are disclosed in prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Re claim 24, Popescu discloses a detecting apparatus (Fig. 1-3) comprising: a substantially rigid structure **6**; a scintillating fiber **2** mounted to the substantially rigid structure **6**, the scintillating fiber **2** having a first end and a second end; the scintillating fiber **2** having length of 2m (Col. 3, 21-22); a light intensity measuring device **1** mounted to the substantially rigid

structure **6** in a substantially relatively immovable manner; coupling means for optically coupling the first end of the scintillating fiber **2** to an active portion of the light intensity measuring device **1** (Col. 2, 31); means for shielding the scintillating fiber **2** from ambient light (Col. 3, 32-35); wherein the light intensity measuring device **1** produces an output signal in accordance with an amount of light generated by the scintillating fiber **2** (Col. 2, 60-63); wherein the substantially rigid structure comprises an opaque tube **3** (Col. 3, 14-15), the scintillating fiber **2** being disposed inside the opaque tube **3** with a longitudinal axis of the scintillating fiber **2** extending in a direction away from the active portion of the light intensity measuring device **1**. Popescu discloses protecting the scintillating fibers using an opaque tube (Col. 3, 13-14), but fails to specify said tube is substantially rigid. Reed teaches a fiber optic radiation monitor comprising a scintillating fiber disposed inside a substantially rigid tube (Col. 2, 40). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with a substantially rigid tube in order to provide protection and durability. Popescu further discloses said apparatus which, in normal operation: detects low-level radiation; evaluates and processes the signal, excluding practically all the noise (filtering high frequency variations); and transmits the signal to a circuit to control a sound generator (Col. 1, 31-51; Col. 3, 41-49). Although Popescu fails to specify an AD converter, those skilled in the art can appreciate that AD converters are well known in the art, and conventionally used in image displaying devices. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Popescu with an AD converter in order to provide digital displays.

Re claim 25, Reed teaches a fiber optic radiation monitor comprising a scintillating fiber disposed inside a substantially rigid tube (Col. 2, 40), but fails to specify said rigid tube comprises a thin-walled aluminum tube. However, aluminum is well known in the art for its durability, therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the rigid tube with a thin-walled aluminum tube in order to provide protection and durability.

Re claim 27, Popescu discloses said light intensity measuring device **1** comprises a photomultiplier tube (Col. 2, 60-63) attached to a first end of the substantially rigid opaque tube **3** by a light-proof connection (Col. 3, 30-32).

Re claim 28, Popescu discloses said scintillating fiber **2** having length of 2m (Col. 3, 21-22).

Allowable Subject Matter

Claims 16, 17, 26, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

With regards to claims 16 and 26, prior art fails to teach an opaque tube having a rectangular cross-section and fails to provide motivation to modify since a rectangular cross-section would teach away from its intended use as a hand-held probe.

With regards to claims 17 and 29, prior art fails to teach a substantially rigid support tube disposed and supported within the opaque tube. Prior art does teach a substantially rigid opaque

tube, and therefore it would not have been obvious to modify said prior art with another substantially rigid support tube.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Houillion et al. (US 6,198,103) discloses a scintillating fiber bundle.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALBERT J. GAGLIARDI
PRIMARY EXAMINER

MT